



**HAL**  
open science

# Sabda Brahma: Science and Spirit of Language in Indian Tradition

Sunil Sondhi

► **To cite this version:**

Sunil Sondhi. Sabda Brahma: Science and Spirit of Language in Indian Tradition. Kalakalpa IGNCA Journal for Arts, 2021, V (2). hal-03372632

**HAL Id: hal-03372632**

**<https://hal.science/hal-03372632v1>**

Submitted on 31 Jan 2023

**HAL** is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

# ***Sabda Brahma***

Science and Spirit of Language in Indian Culture

**Sunil Sondhi\***

## ***Abstract***

*Study of language and communication has been an important concern in India's intellectual and cultural tradition. All streams of Indian philosophical thinking included in their considerations the basic problem of language and communication. While the seeds of the study of language in India may be traced in the Rig Veda, and the study of the structure of language as authoritatively established in the Ashtadhyayi, a full-fledged statement and discussion of a science and spirit of language was given in Bhartrihari's Vakyapadiya. It was Bhartrihari who first systematically equated Brahma (Absolute Reality) with Sabda (language), going on to argue that all language arises as a manifestation of the Sabda Brahma. From the early investigations in the Veda, Pratisakhya and Siksha, through the grammar of language in Ashtadhyayi and Mahabhasya, to the highest levels of consciousness of Sabda Brahma in Vakyapadiya, and Spanda in Tantraloka, India's linguistic tradition bears clear imprint of the recognition that while grammar is important for good language, righteous language is good for coordination and integration in human communication. The connective potential of insightful language needs to be used to address the manifold problems of communication in interpersonal and intercultural relations. Enormous creativity is enfolded in the concept of Sabda Brahma. A deeper and wider understanding of the concept can help to establish a framework for further research and applied work in this direction.*

**Key Words:** Indian Culture, Vedic Heritage, Cultural Linguistics, Applied Linguistics.

## **1. INTRODUCTION**

Study of language and communication has been an important concern in India's intellectual and cultural tradition. It has received serious attention from sages and scholars from the earliest times. All the streams of Indian philosophical thinking included in their discussions the basic problem of language and communication. Indian approaches to the study of language and communication were characterized by both analysis and synthesis. On the one hand systematic attempts were made to analyze language in terms of sentences, words, stems, morphemes and phonemes. On the other, rules of coherence between these various elements were not only systematized but also integrated with the laws of nature (Coward and Raja, p.4). The studies were undertaken in terms of a general scientific methodology which was remarkably consistent, explicit, and open to critical review. From the beginning, linguistics in India has occupied the center of its scientific tradition (Staal, 1974, p.71).

Recent researches have further added convincing evidence to show that even as Indian scholars went deeper into scientific analysis of language and communication they kept their sights steady on the broad and important lines of synthesis and the order of nature (Singh, p.452). Joseph Needham, a pioneer of the study of scientific development in the non-Western civilizations observed that one of the most striking experiences of his life was connected with the ethical values to be attached to science, and he considered ethics to be needed today more than ever. He believed that the Vedic concept of *rta*, the order of nature, its pattern and organization, and its self-originating character underlying all phenomena, could be of much value in furthering the understanding and application of science for the benefit of humanity (Chattopadhyaya, p. vii). Needham seemed to echo Einstein's belief that all the systematic thinking of human beings pales into insignificance when compared with the superiority of intelligence revealed in the harmony of nature (Einstein, p. 40).

The present article explores the development of study of linguistics in India as a field of scientific and cultural inquiry. From the early investigations in the *Veda*, *Pratisakhya*s and *Siksha*, through the grammar of language in *Ashtadhyayi* and *Mahabhasya*, to the highest levels of consciousness of *Sabda Brahma* in *Vakyapadia*, and *Para Vak* in *Tantraloka*, India's linguistic tradition bears clear imprint of the recognition that while grammar is important for better language, righteous language is valuable for coordination and integration in human communication. Very few countries can claim to have produced such a consistent and integrated tradition of holistic studies in language and culture. The insights of India's sages and scholars are now being understood and appreciated better in the light of scientific advances made since the twentieth century.

## **2. SCIENCE AND SPIRIT**

The general trend of Western thinking in the nineteenth century had been toward an increasing faith in the scientific method and its mechanistic, logical worldview. It led to a general disbelief with regard to those concepts and language which did not fit into the closed frame of experimental science. In the mechanistic view, the progress of science was pictured as a crusade of conquest into the material world. Utility was the watchword of the time, and human attitude toward nature changed from a contemplative one to the utilitarian one. This frame of enquiry was so narrow and superficial that it was not easy to find a place in it for the many concepts of human language that always belonged to its very substance, for instance, the concepts of mind, of the eternal spirit, or of life. One of the extreme consequences of this rigid frame of thought was the open hostility of science toward religion and philosophy and its loss of touch with that part of reality which is beyond the objective and material world (Heisenberg, p.137).

This mechanistic view of classical science was reflected in linguistics, where the dominant view was and continues to be, to consider language as being in the heads of individuals, whether as "mental organ", "computational devise", or even "instinct" (Wendt, p.210). In this mainstream view, for long considered as Compositionism, linguists saw the meaning of a whole sentence or paragraph as a function of the meaning of its constituent parts or forms and the way in which they were combined. The resulting image of language and communication is one of mechanical process, which is

materialistic, well-defined and deterministic. It sees communication as transmission and a transaction in which meaning is built up out of smaller semantic forms with intrinsic content. Steven Pinker and Noam Chomsky have argued that linguistic competence is not a cultural creation, and it can be defined in terms of the deep structures of rule based universal grammar.

In the twentieth century, path breaking scientific research showed that there was reality beyond the apparent, objective and mechanistic forms. The conventional or classical way is to see reality as three dimensional space in which objects change over time. Quantum reality is four dimensional space called *spacetime* that simply exists, unchanging, never created and never destroyed (Tegmark, p.270). *Spacetime* does not exist in space and time, rather space and time exist within it. Concepts of past, present and future have no objective meaning in *spacetime*. Description of the *spacetime* tests the limits of our cognitive and linguistic competence because our words and concepts have been shaped by our bounded perceptions of the apparent reality (Einstein, 1952; Bohr, 1958; Heisenberg, 1962; Schrodinger, 1967; Prigogine, 1977).

The penetration of modern science into the world of atoms confirmed the relational or contextual view of reality. At the ultimate core, at the heart of the world and the universe, there is no fixed form, no solidity. Inside the atom, the nucleus is nothing more than a formless oscillating field, waves of rhythm in emptiness. Even the speed and position of subatomic particles is unclear. Entities like quarks have up-ness, down-ness, strangeness, charm, beauty, truth, but no matter. They are formless and exist only when they interact with something else. They have only relationship and pattern of vibration, shadows dancing in pure rhythm (Leonard, p. 34). A few types of elementary particles combine together to infinity like the letters of cosmic alphabet to tell the story of galaxies, stars, light, heat, earth, and life. Physical space and form is the fabric made by this web of interactions (Rovelli, p. 150). These insights of science have far-reaching ontological and epistemological implications for our understanding of the world around and within us, as highlighted by several Noble laureates, renowned physicists and social scientists (Bohr, 1958; Heisenberg, 1962; Charon, 1977; Bohm, 1980; Spariosu, 1989; Smith, 2014; Capra, 2015; Wendt, 2015; Burgess, 2018).

In *Rig Veda*, believed to have been composed around 1500 BCE, the tenth chapter has a compilation of several hymns devoted to fundamental concepts of creation of existence from non-existence. Hymn 10.72, attributed to sage *Brahspati*, is one of such hymns and it gives an insightful account of creation. In this hymn, called *Devah Sukta*, the lord of sacred speech is seen as the craftsman who created the manifest reality from the unmanifest Absolute Reality. The manifest universe is seen as clouds of infinite particles of cosmic dust splashed out in the limitless sky by the dance like movements of the creative lord. Cosmic dust plays an important part in creation by virtue of its formless fluidity and creativity, mediating between matter and spirit (Doniger, p.39).

The *Kausitaki Upanishad* complements the knowledge of the Absolute Reality in terms of a thin essence, as minute as a hair divided a thousand fold, flowing in waves through strings extending from the heart to the surrounding body, as sparks proceeding from a blazing fire, from vital breaths to the sense organs, and from the sense organs to even

hairs and nails and to the worlds beyond. In this essence of life-breath alone a person becomes one with the Absolute Reality. The speech together with all names, the sight together with all forms, the ear together with all sounds, and the mind together with all thoughts, arise from and exists in this life-spirit. He who understands this very life-spirit, overcomes all difficulties, attains pre-eminence among all beings, and supremacy in all situations. (Radhakrishnan, p.790-91). *Tantraloka* says that “one’s own nature consists of this one nature which is the nature of all things” (Furlinger, p.48).

It is an open secret that the pioneers of quantum mechanics, Bohr, Oppenheimer, Heisenberg, Einstein, de Broglie, and in particular Schrodinger were fascinated and inspired by Vedantic philosophy. Schrodinger essentially regarded the Vedantic worldview as an adequate theory for quantum mechanics, “The unity and continuity of Vedanta are reflected in the unity and continuity of wave mechanics. This is entirely consistent with the Vedanta concept of All in One” (Burgess, p. 137). It was the integral vision of Vedantic scholars that made their philosophy comprehend several sciences which have become differentiated in modern times (Radhakrishnan, p.11.). This does not of course mean that Vedantic worldview is identical with quantum view of reality. There is a world of difference between the two approaches. At the same time the, complementarities between the two are too significant to be overlooked.

In the 1920” s and 1930” s, American linguists Sapir and Whorf proposed a „principle of linguistic relativity’ with an explicit reference to Einstein’s theory of relativity (Leavitt, p.18). In the Sapir-Whorf hypothesis “every language is a vast pattern-system, different from others, in which is culturally ordained the forms and categories by which the personality not only communicates, but analyzes nature, notices or neglects types of relationships and phenomena, channels his reasoning, and builds the house of his consciousness” (Whorf, p.251). While this doctrine was new to western science, it stood on unimpeachable evidence of the philosophical investigations known to exist in Indian culture (ibid.). In recent years a growing mass of research on linguistic relativity has developed in linguistics and allied fields of psychology, neuroscience and anthropology (Evans, 2010; Leavitt, 2011; Lee, 1996; Lucy, 1992; Sharifian, 2011; Wilce, 2017).

Application of new scientific knowledge in social science, and particularly in linguistics, emphasizes social and contextual character of language. Language is not a mechanical instrument that can be put on and off. It develops with the thinking process, and thinking develops with communication in context. In the ultimate analysis, in terms of quantum reality, language and thought may be seen as „entangled’, „non-local’, and „inseparable” . Language is therefore essentially uncertain, probable, emergent, and always in a state of making or „languaging’ even when it appears to be formal and definite. Contextual factors are inextricably bound together with language in ways that are enriching, complex and dynamic (Massip, p.57). Words do not have autonomous, objective identities prior to their use in sentences. Every word we use in real-world situations usually has several synonyms or related words in grammar which have similar meaning and which could have been used in context.

Western linguists from Humboldt, Boas, Sapir, and Whorf onwards have all highlighted the ways in which the language is constituted and regulated by norms shared by a

community of speakers and seen as social interaction and coordination rather than mere transmission and transaction. (Wendt, p. 210). In recent years cultural linguistics has emerged as a subfield of the discipline of linguistics to develop a framework that is particularly sensitive not only to the role of culture in linguistic choices, but also to the role of language in maintaining and transmitting the cultural concepts and values. The need to bridge the gap between „language‘ and „cultural context‘ has brought together researchers from a variety of fields to focus on problems of mutual concern from a new perspective and discover solutions that until now have not been visible (Frank, p. 507).

A distinguished contemporary Western scholar has observed that, “In spite of the importance of language as the distinguishing feature of human consciousness and the medium through which all human knowledge passes, the study of linguistics and philosophy of language in the West has only been seriously pursued in recent times. Today’s modern scientific study suffers from focusing on the outer words especially in the written words. Even a cursory look at the long and fully developed Indian study of language strongly suggests that the nature of the language may be more complex and powerful than the modern thought would lead us to suspect” (Coward, p.15).

### **3. SCIENCE OF RITUAL**

The Vedas are often regarded as abstract and mysterious sacred books. If there is one thing the Vedas are not, it is books. Vedas are oral compositions in a language that was used for ordinary communication; and were transmitted by word of mouth like that language itself (Staal, 2008, p.xv.). The Vedic *mantras* are patterns of human speech devised to assist the human mind to reach transcendental consciousness. The *mantric* compositions or formula-language is specialized to create a type of energy manifestation by activating and amplifying the vibrations in the subtle fields of energy or „atoms of space‘ in the nervous system and the physical bodies. The resulting rhythm with the Absolute Reality streamlines the human organism to control, increase and transmit manifold energies which human organism normally transmits only at unobservably low intensities (Whorf , p. 248). *Mantra* is a concentrated form of speech, endowed with special potency and efficacy as it arises from more intense and one-pointed thought (Padoux, p. 373).

In the Vedic age, pure ecstatic practice and contemplation of phonetic sound echoing in the atmosphere through the sacred chant merged easily with the flow and sound of river, on the banks of which such chanting and contemplation took place. “With the river’s raging as the background to the rhythmic recitation of inspired hymns on the banks of Saraswati, the association with speech on the one hand and music on the other can hardly be overlooked” (Ludvik, p. 35). Consonance of sound waves of nature and the sound waves of Vedic chanting creates a rhythmic state of energy and consciousness. The resonance of chanting in chorus came to be called *Nada*, and the river flowing by alongside came to be known as *Nadi* (Berendt, p.16). These names are cultural concepts which carry the contextual in which socio-cultural reality is embedded. *Saraswati* is the goddess of river of life-giving energy, and also of coherent flow of insightful speech. As the river flows from the mountains to the ocean it becomes identified with song, dance

and speech of the communities living by the riverside. The transformative aspect of rituals is firmly grounded in the Vedic tradition of oral recitation (Beck, p. 23).

The high degree of perfection achieved in the control of human voice by the poets and scholars in India produced the ability to differentiate and produce minutest intervals in speech sounds, to synchronize with the rhythm and harmony in nature. “The hymns of the *Rigveda* as recited by the trained priest, have such power, because they consist of the right sounds in the right combinations uttered in the right sequence and with the right intonation; and when they are so recited and accompanied by the right manual actions, they are irresistible. They are sure to accomplish the reciters purpose” (Brown, p. 245). This sensitivity to microtones is an indication of the care with which ‘culture of sound’ was developed in India. It is still believed that such precision in the repetition of exact intervals, over and over again, permits sounds to act upon internal personality, transform sensibility, way of thinking, state of consciousness, and even moral character.

In order to explain their visionary experiences of the Absolute Reality, the Vedic thinkers chose the style of symbolism. The Vedic *mantras* use the names and forms of objects of creation to suggest the essence of the Absolute Reality. “The Ocean, Sky, Air, Water, Fire, Sun, Mountains, Rivers, Trees, Animals, Humans, Clouds, Rain and many more are objects in nature which stand out as alphabets of world language robed in silence, yet eloquent with exploding meaning that can be deciphered according to the intellectual attainment of each individual. The human body, eyes, ears, hands, feet, in breath, out breath, light, sound, movement—all these introduce us to a rich world of symbolical significance” (Agrawal, 1953, p.iv). The objects of Absolute Reality are an integral and essential part of all Vedic rituals and they are considered as the connecting points of the relative and the Absolute Reality. The idea that nature and language are integrated has been for ages well known in Indian culture which has maintained historical continuity much longer than western culture (Whorf, p. 249).

This linguistic and cultural tradition in India established that the integration of the physical and mental, rational and spiritual, individual and social, can be achieved through development of sensitivity towards phonetic elements. The underlying Absolute Reality behind all immanent objects is the same as the hidden reality behind spoken word, it is the transcendental Absolute unconditioned by all forms and names. Knowledge of correct speech not only conveys conventional meaning but also enables one to “see” the Absolute Reality. This is the meaning of the term *darsana* which literally means “sight”. This insight into reality sets Indian philosophy of language apart from modern western perspectives on language which emphasize composition more than contextual relations (Coward, p.33).

The Vedic rituals required the composition of a *padapatha* or “word for word recitation” corresponding to the *samhitapatha* or “continuous recitation” of the Veda. This may have taken place between the tenth and seventh century B.C. Its primary aim was to preserve the Vedic heritage, which in turn was required for recitation at the ritual (Staal, 1974, p.63). In the Vedic ritual language appears in relation to gods as well as humans, and occupies the entire width of a spectrum from being a divinity herself to being a means used by gods to create and the world, and ultimately to being a means in the

hands of the human beings to achieve their own ethical as well as social purposes. The priest-philosophers of Vedic age were deeply concerned with the powers and limitations of speech as a means of communicating their visionary experiences, and this led them to think and discuss about the fundamental question of communication.

Specific hymns dedicated to *Vak* or speech in *Rigveda* mention three stages in the development of language: (1) inarticulate speech, (2) primitive articulate speech, (3) language proper. (Verma, p.1). In *Rigveda* several hymns indicate the power of speech foreseen in Vedic times. In particular, in the *Vag Sukta* in tenth chapter of *Rig Veda*, speech is considered as an unseen, all-pervading, creative and liberating energy, producing, sustaining, and extending all creation. It defends the cause of righteousness and freedom, removes ignorance, confronts and overcomes evil, and rewards the meritorious with riches (Doniger, p.62-63). It is remarkable that in these hymns of the *Rigveda* a semi technical vocabulary was already developed to deal with such linguistic matters as grammar, poetic creation, inspiration, illumination, and so on (Coward, p.33).

In quantum science, waves or fields of energy are the substratum of all existence. Such concepts in modern physics seem to be complementary to the concept of *Vak* in the hymns of *Rigveda*. If we replace the word *Vak* by the word 'energy' in these hymns, we can almost reaffirm these statements from the point of view of modern science. Energy is in fact the essence that sustains life, is a source of all material things, and may be called the imperishable and fundamental cause for all change in the world. Energy is that which moves the air, the water, the sky, the earth, and the sun. It can be changed into motion, into heat, into light, and into sound. This comparison, however, does not mean that the insights of Indian scholars were same as knowledge acquired in modern science after centuries of experiments and mathematical calculations (Heisenberg, p.29).

The intellectual roots of the science of linguistics in India lie in the methods developed for framing rules for complex Vedic rituals. On a philosophical level, ritual is probably also the origin of a leading idea behind grammar as well as other disciplines such as yoga in ancient India: that human activities can be analyzed and explained by explicit rule systems, and that performing those activities in awareness of the rules that govern them brings merit. These initial phonetic and phonological observations, which were piecemeal and ad hoc, were supplemented with similar observations pertaining to morphology, syntax and semantics, and all combined in a single generative grammar of spoken Sanskrit. The main innovation was a methodology that applied the concept of rule to the study of categories of words, word systems and word order, which corresponded to mathematical formalization (Staal, 1996, p.43). Conditions of empirical adequacy, generalization, consistency and methodology, are easily met in the case of Vedic rituals and these should be regarded as experiments and works of science (Staal, 1982, p.31).

The major works on phonetics in ancient India fall into two main categories of linguistic texts, *Pratisakhya*s and the *Sikshas*. The former are phonetic treatises relating to the pronunciation of the four Vedas during the rituals. The *Sikshas* on the other hand are,



with some exceptions, less specifically related to a particular Veda, but in many cases supplement the teaching of the *Pratisakhya*s. While it is likely that the *Pratisakhya*s are based on an early *Siksa*, some of available texts of the latter appear to be of later date than the former (Allen, p.6-7). It seems there was a correlation between *Siksa* and *Pratisakhya*, leading to advancement of both. Apart from these specifically phonetic works, numerous observations on phonetic matters are to be found in the grammatical works, more especially in Panini's *Ashtadhyayi* and Patanjali's *Mahabhasya*.

Very early in their explorations the Indian phoneticians looked into the mental or neural bases of speech. The introductory stanzas of the *Paniniya Siksa* are representative:

*The soul, apprehending things with the intellect, inspires the mind with a desire to speak; the mind then excites the bodily fire which in turn impels the breath. The breath, circulating in the lungs, is forced upwards and it impinges upon the head, reaches the speech-organs and gives rise to the speech sounds. These are classified in five ways- by tone, by length, by place of articulation, by process of articulation and by secondary features. Thus the phoneticians have spoken: take careful heed (Ghosh, Paniniya Siksa, p.54)*

In his pioneering study of the „Phonetic Observations of the Indian Grammarians“ Siddheswar Varma (1961) concluded that:

- The views of Indian phoneticians were not fanciful, but on the whole, sound and accurate observations, some of which may be helpful to modern philology.
- The language which they dealt with was not a grammarian's language but a living language which was in close touch with the experienced reality.
- The empirical adequacy of their observations regarding the pronunciation of Sanskrit is generally corroborated by (a) the phonetic structure of Sanskrit (b) the evidence of inscriptions (c) parallel linguistics.
- The *Pratisakhya*s were not “dead *Pratisakhya*s ” composed for priests who had to be drilled into a proper recital of the sacred texts, but manifest a thrilling interest in the living phenomena of the language.

The *Siksa* and *Pratisakhya*s received the attention of various later commentators. In so far as they were the bearers of a continuous tradition, they were able to augment and elucidate the laconic brevity of the aphorisms. With the benefit of hindsight it seems that these early Indian phoneticians spoke in fact to the twentieth century rather than to the Middle Ages or even the mid-nineteenth century, and many a statement in these texts, make sense to the linguists, the physicists, and the neuroscientists today.

#### **4. GARLAND OF LETTERS**

The word used for the Sanskrit and Hindi alphabet is *Varnamala*, or garland of letters. In Kashmir Shaivism, the word for phonemes is *matrka* or mother, and *Varnmala* for the garland of the mother (Woodroffe, p.227)). The contextual meaning of these words conveys the cultural aspects of the concepts. It also shows that the Cartesian partition between science and spirit which is based on two-valued certainty of Aristotelian logic is

misleading. The processes of both art and science include formal rules, classification, generalization, and consistency. Therefore, the two processes, while not strictly similar, are not very different either. “Both science and art form in the course of centuries a human language by which we can speak about the more remote parts of reality, and the coherent sets of concepts, as well as the different styles of art, are different groups of words in this language (Heisenberg, p. 65).

Panini's *Ashtadhyayi* (ca. 500 B.C.), while providing a complete, maximally concise, and theoretically consistent analysis of Sanskrit grammatical structure, is valued more because it reveals the spirit of India, the Spirit (Feddegon, p. 68). *Ashtadhyayi* is considered as the foundation of all traditional and modern analyses of Sanskrit, as well as having great historical and theoretical interest in its own right. Western grammatical theory has been influenced by it at every stage of its development for the last two centuries. The early 19th century comparativists learned from it the principles of morphological analysis. Bloomfield modeled both his classic Algonquian grammars and the logical-positivist axiomatization of his postulates on it. Modern linguistics acknowledges it as the most complete generative grammar of any language yet written, and continues to adopt technical ideas from it (Kiparsky, p. 1).

*Ashtadhyayi* is formulated in a morphologically, syntactically, and lexically organised form of Sanskrit. To maximize brevity with a minimum of ambiguity, rules are compressed by systematically omitting repeated expressions from them, according to a procedure modeled on natural language syntax. From the viewpoint of their role in the linguistic system, rules can be divided into four types: (1) definitions, (2) metarules, (3) headings, and (4) operational rules. All the individual meta rules in the Paninian system are part of a larger whole, they all come together in the larger domain of language. Co-ordination and certain types of compounding are assigned standardized interpretations. And the nominal cases of the language are used in a conventional way to designate the elements of grammatical rules.

Panini gives a note of warning against extreme theorists who thought that grammatical rules cannot be applied in the absence of exact knowledge of events. He strongly defends the current social and linguistic usage as the best guide to decide theoretical definitions and questions. For him the authority of usage of words must always supersede that of meaning dependent on derivation. Thus, instead of limiting himself to the treatment of accentuation, letter-coalescence, and declension of nouns and verbs, Panini reached out to the wider context of the language in use at all levels of the society. He thus made social usage in all its comprehensiveness as the source material for a living grammar (Agrawal, 1963, p.349).

Panini's grammar describes language as a little drama of life consisting of an action with different participants, which are classified into role types called *karakas*, which include: actor, goal, recipient, instrument, locative, and source (Kiparsky, p.16). Panini's system envisages the structure of language as an evolving hierarchy of inter-category and intra-category relations, from the base of physical reality, the materiality of language, the intermediate levels of increasing consciousness till one reaches the highest level of consciousness - *Sabda Brahma*- where the linguistic phenomena loses its autonomy and

merges in the Absolute Reality. Paninian symbolizes the perfect blending of science and spirituality in India's linguistic tradition (Kapoor, p. 86). All words and meanings are different aspects of one and the same thing, strung together to form a beautiful garland of letters.

For the *Sabdikas* (grammarians) both the *Sabda Brahma* and the conventional language are real. The former is logically prior of the latter. The latter emerges from the former, is sustained by it, and eventually merges into it. This process is not a metaphysical imagination but a physical reality. The substratum of both is same, not just similar. Human beings have the potential and competence to be fully conscious of the Absolute Reality, the single universal substratum of all that exists, perceptible and imperceptible. Generally, however, because of inherently limited sense perceptions, human consciousness remains at the level of the objective universe which is a manifestation of the underlying Absolute Reality. In Indian linguistic tradition there is a persistent refusal to take the objective language and the world it identifies and communicates as final. The enfolding and unfolding of the Absolute Reality in language and communication is a distinctive characteristic of India's linguistic tradition and culture.

A remarkable example of such cultural conceptualization in language is the definition of the word *Indriyam* in Panini's *Ashtadhyayi*. Panini derives *Indriya*, „sense organs‘, from the word *Indra*, the name of the famous Vedic deity, in a short and beautiful *sutra*, “*Indriyam, Indralingam, Indradrishtam, Indrasrishtam, Indrajushtam, Indradattam, Iti, Va*” (Vasu, p. 928). It means, Indra symbolizes senses, Indra observes senses, Indra created senses, Indra celebrates senses, and Indra assigns senses. Thus, *Indriya*, the senses, are so called because *Indra*, the *Atma* or soul is inferred by the existence of the senses. *Iti Va* means that Panini approves any other aspects of the concept given by learned sages which have not been included in the *sutra* (Agarwal, 1963, p. 396). Such openness with regard to the observations of scholars and sages is found in *Mahabhasya*, *Natyashastra* and *Vakyapadiya* also, and it shows the scientific nature of India's linguistic tradition.

Patanjali's *Mahabhasya*, believed to have been composed around 150 B.C., discusses in detail rules from Panini's *Ashtadhyayi* and Katyayana's comments on them given in his commentaries. *Mahabhasya* is a classic text in India's tradition of dialogue, and discussion on the meaning and purpose of language. It analyses each rule of *Ashtadhyayi* into its elements, adding comments necessary to the understanding of the rule. It attempts to bring out the full significance of Panini's *sutras* and explain the usages not covered by the rules or against the rules. Patanjali emphasizes that the purpose of studying grammar is to speak correct language to achieve understanding of the Absolute Reality, and also to achieve *dharma* (righteousness) in practice. Through the medium of grammar and use of correct words it is possible to be conscious of and become one with the Absolute Reality (Sastri, p.28).

Similar integration and evolution from the particular to the universal can be seen in Bharat Muni's *Natyashastra*. Believed to have been composed around 100 BC, *Natyashatsra* is a theatrical and literary composition that reflects a world view and

fundamental ideas which drew upon the well-articulated discourse in language and communication in Indian intellectual tradition. *Natyashastra* helps us to identify the sources on which the composition was based and the state of knowledge of linguistics at the turn of the millennium. Bharat Muni was not only familiar with the Vedas and their status in the Indian tradition, but was well aware of their content, substance and form. *Natyashastra* traces both the spoken word and the idea of the word from the *Rgveda*.

*Natyashastra* begins with salutation to *Brahma* and *Siva*, and the principles of theatrical presentation are attributed to *Brahma*. Several chapters in the *Natyashastra* are devoted to verbal presentation, local usages, rules on use of language, metrical patterns, gestures, and emotions etc. The language of *Natyashastra* shows an understanding of the use of different languages and dialects by different groups of people and throws light on recognition and acceptance of diverse people, languages and dialects. The ethno-linguistic data in *Natyashastra* is an important source for tracing the development of Indian languages from Vedic Sanskrit to Classical Sanskrit, Prakrit and the dialects. It treats the subject of language and communication, like Panini, as rules, and each section is detailed in very refined analytical manner. The whole is analyzed into parts and each part is examined in depth with a view to again creating an interconnected and interpenetrated whole.

The presentation of the theatre was compared in *Natyashastra* with the performative act of Vedic yagna. The mention of *sattva* or mindfulness, and the importance of musical sounds, during the presentation, are instance of drawing upon the living and vigorous tradition of Vedas at that time. The smoothness and flow in representation is considered so important that it is even mentioned that there is no word without rhythm, and no rhythm without a word. Combined with each other they are known to illuminate the representation (Ghosh, I, p.359). Elsewhere, the specific qualities of good composition and representation are described in detail and include: focus, simplicity, precision, relevance, cohesion, agreeableness, and smoothness. A representation containing simple words, intelligible to common man, using emotions, and accommodating and integrating people is considered good to be shared with the people (ibid. p.434).

The integral unity of the manifest and the unmanifest world, and its communication through presentation is the core content of the classic text. It integrates the world of essence, the world of reflection and feeling, with that of structure and grammar. In *Natyashastra*, universality and specificity, abstraction and generalization, the structured and flexible are seen as interdependent and interpenetrating levels of communication. It considers a presentation good if it can communicate at varying levels to different audiences in culture specific and transcultural contexts. At the same time, while being in finite time and place, it must have power to communicate beyond time and place (Vatsyayan, p. 89-90).

It is evident that Indian scholars postulated that communication has both phenomenal and metaphysical dimensions. Etymologists like Yaska, and grammarians like Panini and Patanjali, and playwrights like Bharat Muni were clearly concerned with the context of real life situations, but they did not overlook the umbilical relationship of the empirical and the spiritual. Bhartrihari began with a metaphysical inquiry into the

nature and origin of language in relation to *Brahma*, but also explored technical grammatical points in popular language.

For Bhartrihari grammar is the remedy for all the impurities of language, the purifier of all the sciences and illumination of every branch of knowledge. By using correct speech the mind becomes free of all subtle impressions of incorrect speech, and it gradually rises to the level of *Pratibha* or direct and pure awareness. Such awareness is the essence of all phenomenal creation and in such a state all the differences and contradictions in the relative world are seen in the wider context of the Absolute Reality (Bhattacharya, p.34).

These scholars avoided two reductionist mistakes that western scholars like Aristotle made. First, they did not reduce language to the condition of merely convention based on factual referents. Second, they did not resort to metaphysical reductionism that so devalues human language that it becomes obscure mysticism. In Indian linguistic tradition, the study of a particular phenomenon and its exploration as a noumenal unity are not mutually exclusive. They are both considered as parts of a systems view of life and language (Coward and Raja, p.34).

## 5. SPIRIT OF LANGUAGE

While the seeds of the study of phonetics in India may be traced in the *Rig Veda*, and the study of the structure of language was authoritatively established in the *Ashtadhyayi*, a full-fledged statement and discussion of a science and spirit of language was given in Bhartrihari's *Vakyapadiya* (Pillai, p.12). Bhartrihari begins his *Vakyapadiya* with metaphysical enquiry and then goes on to empirical study of phenomenal language. In the first section of the work called *Brahmakanda* are given the basic ideas concerning the concept of *Sabda Brahma*. In the second section called *Vakyakanda* the fundamental idea of the integral nature of the sentence is discussed. The third section is the largest, in which grammatical topics mostly concerning words and their meaning are discussed. This section is called *Prakarankanda*. All the sections are interrelated and connected and form an integral whole.

There are rudiments of the doctrine of *Sabda Brahma* in Sanskrit texts right from the Vedas and the Upanishads, but an exhaustive postulation and discussion of *Sabda Brahma* is given in *Vakyapadiya*. It was Bhartrihari who first systematically equated *Brahma* (the Absolute) with *Sabda* (language), going on to argue that everything arises as a manifestation of the *Sabda Brahma*. (Coward and Raja, p. 34). *Sabda Brahma* has also been defined as Communicative Brahma (Wilke, p.629). Bhartrihari harmonized the speculations of the *Sabdikas* with Advaita philosophy. He believed that grammar gives the foremost spiritual training and is the most important subsidiary texts of the Veda. Grammar is a gateway to liberation, a cure to the blemishes of speech, and purifier of all other disciplines. It is the first step on the ladder towards liberation, and is the straight Royal Road for those desirous of that goal. The soul which has passed beyond errors in grammar can observe *Brahma* in the form of *Om* (Pillai, p. 2-4).

In *Rig Veda*, *Brahma* is used in the sense of sacred knowledge, or a hymn, or speech, the manifest expression of the character of spiritual consciousness. Sometimes speech is personified as the *Brahma*. In *Brahad-aranayaka Upanisad* *Brahma* is seen as the Real of the real, the source of all existing things. *Svetsvatara Upanisad* says “*Brahma* is the principle which unifies the world of the physicist, the biologist, the psychologist, the logician, the moralist, and the artist” (Radhakrishnan, p.59). “*Brahma* is the basic element and active force of all natural and historic things and events” (Berendt, p.17). *Mandukya Upanisad* says that the four principles of Absolute Reality are *Brahma* the Absolute, *Isvara* the Creative Spirit, *Hiranya-garbha* the World spirit and *Viraj*, the World. This is a logical succession and not a temporal one.

The *Brihad-aranayaka Upanishad* speaks of “two forms of *Brahma*, the formed and the formless, the mortal and the immortal, the moving and the unmoving, the actual (existent) and the true (being)” (Radhakrishnan, p.192). In the *Maitri Upanishad*, language is seen as indistinguishable, uncharacterized and unmanifest non-sound of *Brahma*. The differentiated sounds and words emerge and merge in the supreme, the non-sound, the unmanifest *Brahma*. Thus, there are two *Brahmas* to be known, the sound *Brahma* and the non-sound *Brahma* which is higher. Those who know the sound *Brahman* get to the higher *Brahma* (ibid. p.833).

Continuing in the Vedantic tradition, Bhartrihari sees *Brahma* as the imperishable Absolute Reality which is beginningless and endless. The essence of the *Sabda* or language is derived from this Absolute Reality. The differentiated forms and names that derived from the *Sabda* constitute the objective world (Pillai, p.1). *Brahma* and the *Sabda* are integrated. *Brahma* is in the *Sabda*, it is the Spirit of the *Sabda*. It is the Spirit that makes speech pervasive, powerful, and creative. It is the Spirit of the *Sabda* that makes the Vedas the *Sabda* of God. It is the Spirit of the *Sabda* that makes the speech move with gods, and brings and knowledge to the sages. It is the Spirit of the *Sabda* that brings riches and successes to people in their lives. The Spirit of the *Sabda* is *Sabda Brahma*.

Bhartrihari's enquiry into the relationship of word and meaning in the *Prakarankanda* includes a clear analysis of the limitations and inadequacies of ordinary or secondary words to communicate all dimensions and levels of the Absolute Reality. Secondary words express only segments of Absolute Reality which are not autonomous, and the Absolute reality in its undivided wholeness and flowing movement can never be expressed by the words and concepts of human language (Iyer, p. 105). As the well-known *Rigvedic* hymn says, speech merely recognizes and gives meaning to manifold forms arising out of the waters of the infinite ocean of ultimate reality (Kapoor, 2010, p. 5). *Taittiriya Upanisad* completes the message when it says, “*yato vaco nivartante, aprapya manasa saha, anandam brahmano vidvan, na bibheti kadacana*”. From where the words return along with the mind, only the one who knows that undifferentiated *Brahma* attains supreme bliss (Radhakrishnan, p.545).

For Bhartrihari, the child and the scholar are in the same position as far as limitations and inadequacies of understanding and communication are concerned. Both understand and communicate only part of the reality (Iyer, p.107.) The common words, therefore,

are unable to express the cosmic nature of reality. Words express the reality of any object or event in a manner that may be a misinterpretation and misrepresentation of the reality of the object or event. "Words are based on cognitions which do not reveal the full reality and so present things in another form, not determined by their real form." (ibid., p. 105-107.) Bhartrihari emphasizes that in ordinary cases of language use, the literal form may not convey the intended meaning. In such cases a thorough understanding of the context is required to avoid confusions and misunderstanding in communication (Pillai, p.108).

In practice, the words and language is used on the basis of bounded rationality. Ordinary people do not follow the understanding that may have been reached by scholars and sages, they understand things superficially and accordingly engage in communication. The *Prakarnakand* was an attempt to explain and organize words as used by the common people. The notions of action, substance and quality and so on used by science of grammar are all worldly and secondary notions. Ordinary words can express only those aspects of reality which appear in our cognition. They do not touch the undifferentiated and un-manifest reality, but move about in the world of differentiated and manifest reality (Iyer, p. 120). In a sense, we create some form of reality, for ourselves, just by speaking about it. This reality too, like the one created by sight, is relative. However, unlike sight, speech is uncertain and ambiguous, and therefore, it is free and creative, like the Absolute Reality (Ellul, p.12).

Just as different perceptions reveal an object in a different form, similarly meaning is understood from words in various forms. A word-meaning intended in a certain way by a speaker takes different shapes in different hearers depending upon the comprehension of each. Although the same object is perceived, its perception varies from person to person, and even the same person perceives the same object in a different form on another occasion. The same person at different times and different persons at the same time understand the meaning of the same word in different forms due to the different ways of understanding (Pillai, p.69-72.)

When a word can give different meanings, how does one decide the most appropriate word in a particular context? Bhartrihari refers to a list of factors which can help in making a proper decision with regard to the meaning of a word. The list includes complementary aspects, unrelated aspects, relevance, contradiction, the meaning of another word, situation-context, evidence from another sentence, and the proximity of another word. From this it is evident that the form of a word by itself is not sufficient to provide the most appropriate meaning in all contexts. Meaning lies in the intention behind the spoken word and the context in which it is communicated and heard (ibid., p. 108).

When the word-meanings in a sentence are placed in a wider verbal and situational context then a flash of insight *Pratibha* may be produced out of such wider correlation. That flash of insight caused by a new connections or interrelation of word-meanings is described as the most appropriate meaning of the sentence. It is by no means describable to others in such terms as "it is like this" Having been formed out of the functioning of one's thinking, its nature is not known beforehand even to the person.

The meaning is emergent from the contextual relationships and not inherent in the word.

*Pratibha* or insight emerges from the combination and fusion of the different word-meanings, without being logically and rationally thought out in precision, and it is comprehended as seemingly taking the form of the holistic connection of the word-meanings. The interconnection has no defined form, and may be known as having non-existent structure in the ultimate analysis. Such a flash of insight arises from recollection based on past experiences and its connection with the current experience. This recollection could be invoked by introspection, practical activity, or by advice from learned scholars.

In Kashmir Saivism, *Vak* is identified with *Kundalini* or cosmic and human energy (Padoux, p.125). Abhinavagupta considered *Sabda Brahma* as the cosmic evolution of the supreme energy *kundalini*, which emerges from the union of *Siva-Sakti*. *Siva's* energy manifests itself in *matrka* or phonemes. Language is the binder of the absolute and relative worlds, and the link between them because it shares the essence and nature of both which consists of *Spanda* or vibration of *Siva's* energy (Isayeva, p.135). Language is both bondage and liberation, from ordinary and local to the universal Absolute Reality, because it is a form of vibration of energy fields. Language is thus the power of insightful speech accessing the Absolute Reality from the diversity of manifestation (Kuanpoonpol, p.70). *Spanda* connects the particular with the Absolute Reality. As an individual recognizes the presence of Absolute Reality, he „sees“ himself as the Absolute Reality (Pandit, p. 70).

The concepts of *Pratibha* and *Spanda* even though not empirically or logically defined, seem to be more effective in communicating the nature of the Absolute Reality than the concepts of scientific language, which are derived from only limited groups of phenomena. In the scientific process of experimental verification and definition the integral connection with the multidimensional and multilevel reality may be lost. On the other hand, natural language may represent some parts of reality much more clearly than by the use of scientific language, because it can influence thought in ways which are not always logical and analytical, and also because of inherent limitations of logical reasoning (Heisenberg, p.139). An indirect and secondary meaning of the word which passes through the mind only momentarily may contribute essentially to the understanding of its meaning. The fact that every word may cause many such diverse movements in our mind can be used to correlate different aspects of the reality and get a clearer understanding than is possible by the use of strictly and narrowly logical reasoning (ibid., p.115).

Poets have often objected to the emphasis on logical reasoning which makes language less suitable for its purpose. Rabindra Nath Tagore, Nobel laureate in literature, believed that all poetry is full of symbolic expressions which communicate through suggestion all that is ineffable. If language were merely for expressing grammatical rules, then using such a language would be fruitless pedantry without a spirit. Since language has for its ultimate purpose the expression of ideas, our minds gain freedom through it, and the knowledge of grammar is a help towards that freedom. When



language assumes the harmony of forms and the balance of flow it hints at the limitless that transcends words, “like a lamp revealing light which goes far beyond its material limits, proclaiming its kinship with the sun” (Radhakrishnan, p. 944). Creative and ingenious thinkers, like the *Rigvedic* and later *Upanishadic* sages, employed poetic language to break open and extend the boundaries of expression to successfully communicate the hidden dimensions and levels of the ultimate reality (Matilal, p.151-155).

In recent years, researches in neuroscience have further confirmed the importance of broad concepts of natural language, rather than more logical and precisely composed definitions, in providing insights into the nature of reality. Neurological evidence has shown that when listeners encounter a word or concept, a semantic field related to the word is activated in the brain in which features properties and associations of that word are connected. In the left hemisphere of the brain a relatively smaller semantic field of associations is strongly activated which closely relate to the dominant interpretation or the current context. On the other hand, the right hemisphere weakly activates a relatively broader semantic field that includes associations distantly related to the word or context. In this way, semantically distant words needed to understand metaphors, draw inferences and appreciate the many nuances of discourse, can be accessed and integrated (St. George, p. 1324).

The broader semantic relationship in the right hemisphere has one big advantage: The less sharply each word's meaning is specified, the more likely it is to connect with other words and concepts. This is a key ingredient for drawing inferences, extracting the essence, and comprehending symbolic language, and for insight and awareness of wholeness and integrated nature of reality (Kounios and Berman, p. 6). Harmony between the „left brain' and the „right brain' provides an overall grasp of what is known in formal, logical terms, and also intuitively, in vision, feelings, and imagination etc. (Bohm, p. xvi). Original and creative ideas emerge from coordination of well-structured language and concepts contained in the field of empirical study with less sharply defined words and concepts in the field of philosophy and arts. Science and spirit are then in harmony, as they are different yet complementary ways of considering the ultimate reality which is an undivided wholeness in flowing movement (ibid. p.33).

In Japan, the concept of *Kotodama*, has been an important feature of the native Japanese language since ancient times (Miller, p.262). To put it simply, *Kotodama* means “Word Spirit”, Or “Word Soul”. It shows that the ancient Japanese too believed that words had magical powers, and by uttering appropriate words all things in the universe could be controlled. The belief in *Kotodama* indicates people's faith in words and sounds, which is expressed in praying for good fortune or for prevention of undesirable events. Verbal messages stemming from *Kotodama* belief are often seen in daily Japanese interaction, and people's interpersonal sensitivity leads them to be careful of their word choice and speech in verbal communication. Japanese people's use of pleasant language and gestures as a display of caring for others' feelings reflects the *Kotodama* belief in which they feel some kind of spirituality (Hara, p.286).

In the modern age, rationalism makes it hard to understand just how the correct use of words can bring *Pratibha* or mystical insight, create moral power, and bring merit and success. Today we live in a world from which the spirit of the word has been abstracted and in a sense dehumanized, and therefore we experience some difficulty in understanding how powerful the spirit of words and sounds was for the deep and subtle oral culture of Vedic India. For Bhartrihari, as for Vedic sages, *sabdikas* Panini and Patanjali, and playwright Bharat Muni, when speech is purified by the established correct forms and all deficiencies in the form of incorrect use are removed, there results spiritual righteousness which brings the experience of well-being and moral power (Coward and Raja, p.45).

## 6. CONCLUSION

The concept of *Sabda Brahma* enfolds a fundamental idea running through India's linguistic and spiritual tradition. This is the idea of the umbilical relationship of language and the Absolute Reality. *Sabda* or language belongs to the realm of the Absolute Reality, *Brahma*. As Rabindra Nath Tagore put it, "the consciousness of the reality of *Brahma* is as real in Indian tradition as a fruit held in one's palm" (Radhakrishnan, p.941). The Absolute Reality is knowable not on the basis of mere words, but on the basis of *Pratibha* or insight into the essence of words. Patanjali considers learning words without understanding as dry logs on extinguished fire (Sarup, p.19). *Sabdanusanam* or grammar as established in the texts by learned scholars of language in use is seen as a means to achieve consciousness of the Absolute Reality.

*Sabda Brahma* emphasizes that freedom and creativity of language is rooted in the Absolute Reality. This cultural conceptualization of the nature of language has far reaching implications for our language and communication. Whatever the particular language and the linguistic community, the spirit and sound of the word emerge from and merge into Absolute Reality. Since language arises from and exists in Absolute Reality, it gains its power, freedom and creativity from that source. When language is illuminated with the light of Absolute Reality, then the limiting aspect of its separateness loses its locality, and our communication with others is not in a relationship of competition and conflict, but of accommodation and integration in conformity with the order of nature. Language stemming from an awareness of the source of all speech, *Brahma*, the Absolute Reality, unfolds and uses complete awareness to create consensual and integrative communication.

The contemporary relevance of the concept of *Sabda Brahman* can be seen in the context of the social, economic, political and ecological problems of our time which require solutions at the global level through mutual interaction and communication. *Sabda Brahma* is the language of the dynamic and interconnected Absolute Reality. Every nation, every government, every society, every race, every culture, every religion is essentially a manifestation of the Absolute Reality. Language and communication which is of the nature of Absolute Reality connects them all. *Sabda Brahma* is infinite and uncertain, and this uncertainty is the source of its freedom and creativity. It has the power to fill the gaps that separate nations, communities and people. Enormous creativity is enfolded in the concept of *Sabda Brahma*. A deeper and wider

understanding of the concept can help to establish a framework for further research and applied work in this direction.

## References

1. Agrawala, V.S. (1963). *The Thousand Syllabled Speech: Being a Study in Cosmic symbolism in its Vedic Version*. Varanasi: Banaras Hindu University.
2. Agrawala, V.S. (1953). *India as Known to Panini*. Lucknow: University of Lucknow.
3. Allen, W.S. (1953). *Phonetics in Ancient India*. London: Oxford University Press.
4. Beck, Guy (1995). *Sonic Theology: Hinduism and Sacred Sound*. New Delhi: Moti Lal Banarsi Das.
5. Berendt, Joachim-Ernst (1991). *The World is Sound: Nada Brahma*. Rochester: Destiny.
6. Bhattacharya, Bishnupada (1985). *Bhartrihari's Vakyapadia and Linguistic Monism*. Pune: Bhandarkar Oriental research Institute.
7. Bohm, David (1980). *Wholeness and the Implicate Order*. London: Routledge & Kegan.
8. Bohr, Niels, (1958). *Atomic Physics and Human Knowledge*. New York: John Wiley.
9. Brown, Norman, (1958). *Class and Cultural tradition in India*, *American Folklore*, Vol. 71, No.281, July Sept., p. 245.
10. Burgess, Peter (2018). "Science Blurring its Edges into Spirit: The Quantum Path to Atma". *Millennium: Journal of International studies*, Vol.47(1) 128-141.
11. Chen, G.M. and Starosta, W.J. (2003). *Asian Approaches to Human Communication: A Dialogue*. *Intercultural Communication Studies*, 12(4), 1-15
12. Charon, Jean Emile (2005). *The Spirit: That Stranger Inside Us*. West Conshohocken PA: Infinity Publishing.
13. Chattopadhyaya, Debiprasad, ed. (1986). *History of Science and Technology in Ancient India-The Beginnings*. Calcutta: Firma KLM.
14. Coward, Harold G. (1980). *The Sphota Theory of Language: A Philosophical Analysis*. New Delhi: Motilal Banarasi Dass.
15. Coward, Horold G, and K Kunjunni Raja (1990). *Encyclopedia of Indian Philosophies*. New Delhi: MLBD.
16. Deshpande, G.T. (2011). *Pre-Paninian Grammar*. Mumbai: Popular Prakashan.
17. Doniger, Wendy (2000). *The Rig Veda*. Gurugram: Penguin.
18. Einstein, Albert (1952). *Ideas and Opinions*. New York: Crown Publishers.
19. Ellul, Jacques (1985 ). *The Humiliation of the Word*. Grand Rapids: Eardsman.
20. Evans, Nicholas (2010). *Dying Words: Endangered Languages and What They Have to Teach Us*. Chichester: Wiley Blackwell.
21. Faddegon, Barend (1963). *Studies on Panini's Grammar*. Amsterdam: UITGAVE.
22. Frank, Roslyn M. (2019). „A Future Agenda for Research on Language and Culture", in Sharifian, Farzad (2019). *The Routledge Handbook of Language and Culture*. London: Routledge. Pp.493-511.
23. Furlinger, Ernst (2009). *The Touch of Sakti: A Study in Non-dualistic Trika Saivism of Kashmir*. New Delhi: DK Printworld.
24. Garcia, Helio Fred (2014). *The Power of Communication*. New Jersey: Pearson.

25. George, M.S. et al. (1999). Semantic Integration in Reading: engagement of the right hemisphere during discourse processing. *Brain*, Vol. 122, 1317-1325.
26. Ghosh, Manomohan (2016). *Natyashastram*, 2 Vol. Varanasi: Chaukhamba Surbharti.
27. Ghosh, Manomohan (1938). *Paniniya Siksa*. Calcutta: University of Calcutta.
28. Hara, Kuzuya (2002). „The *Sabda* is the Thing: The “Kotodama” Belief in Japanese Communication”. *ETC: A Review of General Semantics* Vol.58, No.3, pp 279-291.
29. Havell, E.B. (1922). *The History of Aryan Rule in India*. London: George Harrap.
30. Hayakawa, S. (1968). *Language in Thought and Action*. London: George Allen and Unwin.
31. Heisenberg, Werner (1962). *Physics and Philosophy*. New York: Harper and Row.
32. Isayeva, Natalia (1995). *From early Vedanta to Kashmir Shaivism: Gaudapada, Bhartrihari and Abhinavagupta*. New Delhi, Sri Satguru publications.
33. Iyer, K.A. Subramanya (1992). *Bhartrihari: A Study of Vakyapadia in the light of Ancient Commentaries*. Poona: Deccan College.
34. Iyer, K.A. Subramanya (1971). *The Vakyapadiya of Bhartrihari, Chapter III, Part I*. Poona: Deccan College.
35. Jha, V.N., ed. (2010). *Language, Grammar and Linguistics in Indian Tradition*. New Delhi: Munshi Ram Manohar Lal.
36. Kapoor, Kapil (2010). *Dimensions of Panini Grammar: The Indian Grammatical System*. New Delhi: DK Printworld.
37. Kaviraj, Gopinath (1923). *The Doctrine of Pratibhā in Indian philosophy*. Poona, *Annals of the Bhandarkar Oriental Research Institute*, Vol. 5, No. 1 (1923–24), pp. 1-18.
38. Kiparsky, P. (2002). *On the Architecture of Panini's Grammar*, Paper presented at Conference on Architecture of grammar. Hyderabad: CIEFL.
39. Kuanpoopol. Priyawat (1991). *Pratibha: The Concept of Intuition in the Philosophy of Abhinavagupta*. Ann Arbor: UMI.
40. Kounios, John , and Mark Beeman (2014) *The Cognitive Neuroscience of Insight*, *Annual Review of Psychology* 65(1):71-93 · January 2014
41. Lanny, Richard, 1971, *The Speaking Tree*. London: Oxford university Press.p.275
42. Leonard, George ((1978). *The Silent Pulse: A Search for Perfect Rhythm That Exists in Each of Us*. New York: E.P. Dutton.
43. Leavitt, John (2019). “Linguistic Relativity: Precursors and Transformations”, in Farzad Sharifian, ed., *The Routledge Handbook of Language and Culture*. New York: Routledge,.
44. Lucy, John A. (1992). *Language Diversity and Thought*. Canbridge: Cambridge university Press.
45. Ludvik, Catherine (2007). *Saraswati: Riverine Goddess of Knowledge*. Leiden: Brill.
46. Massip, A. Bonet (2011). “Language as a Complex Adaptive System: Towards an Integrative Linguistics”, in James Simpson (Ed.), *Routledge handbook of Applied Linguistics*. (New York: Routledge).
47. Matilal, B.K. (2014). *The Sabda and the World: India's Contribution to the Study of Language*. New Delhi; Oxford.

48. Maxwell, John C. (2010). *Everyone Communicates Few Connect*. Nashville: Thomas Nelson.
49. Miller, Roy Andrew (1977). The “Spirit” of the Japanese Language. *The Journal of Japanese Studies* Vol 3, No.2, pp.252-298.
50. Needham, Joseph. (1969). *The Grand Titration: Science and Society in East and West*. London: Allen and Unwin.
51. Pandit, B.N. (1997). *Specific Principles of Kashmir Shaivism*. Delhi: Munshiram Manoharlal.
52. Pillai, Raghavan (1971) Tr. *The Vakyapadia*. New Delhi: MLBD
53. Prigogine, Ilya (1977). *The End of Certainty*. New York: Free press.
54. Radhakrishnan, S. Tr. (2007). *The Principal Upanishads*. New Delhi: Harper Collins.
55. Rajvade, V.K. (1940). Tr. *Yaska' Nirukta*. Vol. I. Poona: Bhandarkar Oriental Research Institute.
56. Ram Swarup (20011). *The Sabda as Revelation: Names of Gods*. New Delhi: Voice of India.
57. Ranganathananda, Swami (2015). *The Universal Message of the Bhagvadgita*, Vol.2. Kolkata: Advaita Ashram.
58. Rigveda (2017) Saraswati, Dayananda. *Rigveda: Complete Translation*, Vol. 1 New Delhi: Hasananda.
59. Rovelli, Carlo (2017). *Reality is Not What it Seems: The Journey to Quantum Gravity*. London: Penguin.
60. Sarup, Lakshman (1966). *The Nighantu and The Nirukta*. Delhi: Moti Lal Banarasi Das.
61. Sastri, P.S.S. (2015). *Lectures on Patanjali's Mahabhasya*, Vol. 1. Chennai: Kuppaswami Sastri research Institute.
62. Schrodinger, Erwin (1967). *What is Life and Mind and Matter*. Cambridge: Cambridge University Press.
63. Sharifian, Farzad (2019). *The Routledge Handbook of Language and Culture*. London: Routledge.
64. Singh, Navajyoti (1986). “Linguistic and Oral Tradition in the Period Between the Decline of Harrapan Culture and the Rise of Magadhan Culture”, in Chattopadhyaya, Debiprasad, ed. (1986). *History of Science and Technology in Ancient India-The Beginnings*. Calcutta: Firma KLM. pp. 406-453.
65. Smith, David (2014). *The Dance of Shiva: Philosophy Art and Poetry in South India*. New Delhi, Cambridge University Press.
66. Spairosu, Mihai I. (1989). *Dionysus Reborn*. Ithaca, NY: Cornell University Press.
67. Staal, Frits, (1996). *Rituals and Mantras: Rules Without Meaning*. New Delhi: Motilal Banarsi Dass Publishers.
68. Staal, Frits (1982). *The Science of the Ritual*. Poona: Bhandarkar Oriental Research Institute.
69. Staal, Frits (2008). *Discovering the Vedas: Origins, Mantra, Rituals, Insights*. New Delhi: Penguin.
70. Staal, Frits (1974). “The Origin and Development of Linguistics in India”, in Dell Hymes, ed. *Studies in the History of Linguistics*. Bloomington: Indiana University Press.

71. Strogatz, Steven (2003). *Sync: The Emerging Science of Spontaneous Order*. New York: Hyperion.
  72. Tripathi, Radhavallabh (2017). *Vada in Theory and Practice*. New Delhi: DK Printworld.
  73. Varma, Siddheshwar (1961). *Critical studies in the Phonetic Observations of Indian Grammarians*. Delhi: Munshiram Manoharlal.
  74. Vasu, S.C. Tr. (1988) *Panini's Ashtadhyayi*. Delhi: Motilal Banarasi Das.
  75. Vatsyayan, Kapila (2016). *Bharata: The Natyasastra*. New Delhi: Sahitya Akademi.
  76. Verma, V.K. (2016). *Rigveda Pratishakhyam*. Delhi: Chaukhamba Sanskrit Pratishthan.
  77. Wendt, Alexander (2015). *Quantum Mind and Social Science*. Cambridge: Cambridge University Press.
  78. Whorf, Benjamin Lee (2010). *Language Thought and Reality: Selected Writings of Benjamin Lee Whorf*. Cambridge: MIT Press.
  79. Wilce, James M.(2017). *Culture and Communication*. Cambridge: Cambridge University Press.
  80. Wilke, Annette (2011). *Sound and Communication: An Aesthetic Cultural History of Sanskrit Hinduism*. Berlin: DeGruyter.
  81. Woodroffe, John (2019) Reprint. *The Garland of Letters*. Madras: Ganesh and Company.
- 

\*Prof. Sunil Sondhi is Project Director, ICSSR-IMPRESS project on „Culture and Communication in India: Contemporary Relevance of Classical Indian Texts”, affiliated with IGNCA, New Delhi. Financial assistance from ICSSR for the project is gratefully acknowledged.